



United States  
Department of  
Agriculture

Economic  
Research  
Service

Agriculture  
Information  
Bulletin  
Number 616

October 1990

# Farm Businesses End the Decade With Strong Financial Performance

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This report presents the latest information on the financial performance of U.S. farms. The findings summarize the upcoming *Financial Characteristics of U.S. Farms, January 1, 1990*. Data were obtained from the Farm Costs and Returns Survey (FCRS) conducted in February and March 1990 by USDA's National Agricultural Statistics Service. About 24,000 farmers across the Nation participated in the survey, which detailed whole-farm data for all survey respondents plus enterprise-specific data for selected commodities.

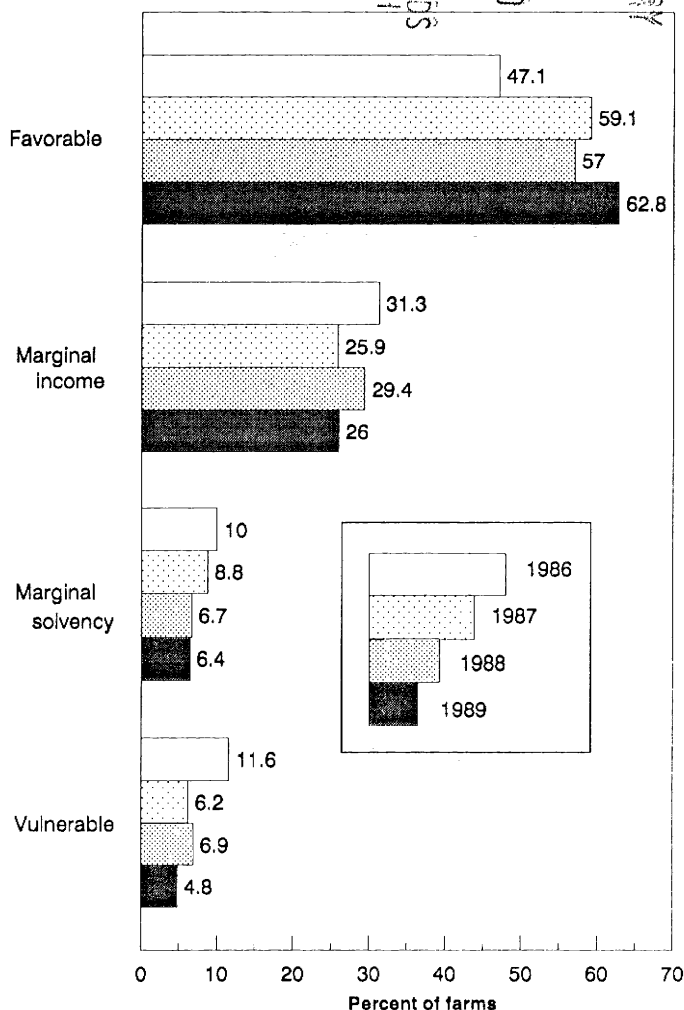
## Highlights include:

- The proportion of farms with positive income rose for all sizes of farms, for farms in the eastern half of the Nation, and for all but two production specialties.
- While debt owed by farm operators remained similar to levels at the end of 1988, rising asset values improved the 1989 balance sheet for farm operators.
- Improvement in the overall financial performance of farm operators in 1989 reflects a resurgence in farm income following 1988's drought and increasing real estate values over the last 4 years (fig. 1).
- Farm businesses in a vulnerable financial position were more highly leveraged and had expense-to-income ratios indicating that operating expenses (particularly interest) exhausted farm earnings.
- The share of farm operator debt owed by financially vulnerable farms declined by \$6 billion in 1989, the largest share of which was owed to commercial banks.

Figure 1

## Distribution of farms by financial position

*The general improvement in farm financial performance resumed along the upward trend that had been interrupted by 1988 drought conditions. Fewer farms were financially vulnerable by the end of 1989 and more farms were in a favorable financial position.*



## Growth in Cash Receipts Raises Average Income

**Net income rose the most for farms with gross sales below \$40,000; for farms located in the Southern Plains, Southeast, and Corn Belt regions; and for farms that specialized in the production of cotton and dairy products.**

Average farm profits of operations represented in the survey were over 50 percent higher in 1989 than in 1988 (table 1), as net farm income climbed to \$18,134 (up from \$11,434 in 1988). (See box below for a description of income measures.) A more modest gain in average net cash income occurred during the same period. Net cash income, the difference between gross cash earnings and cash expenses, rose from \$11,640 in 1988 to \$15,176 in 1989. The increase in both measures of average income was widespread among different sizes of farms, regions of the country, and production specialties. Income rose the most for farms with gross sales below \$40,000; farms located in the Southern Plains, Southeast, and Corn Belt regions; and farms that specialized in the production of cotton and dairy products. The only reduction in average income occurred in the Northern Plains.

Farmers received higher cash earnings as a result of increasing commodity receipts offsetting lower direct Government payments and higher operating expenses. Average gross cash income increased by 7.5 percent. Cash receipts from the sale of crops and livestock (which represented over 85 percent of gross cash income) grew by 9 percent and were largely responsible for the higher gross cash income. The growth in crop receipts was almost three times that of livestock sales. Direct payments represented 6 percent of gross income in 1989, compared with over 10 percent in the mid-1980's. Additional sources of farm income, such as machine-hire, custom work, and land rental, increased by 27 percent. Average cash expenses rose by 2.4 percent, most components of which increased since 1988. The largest increases were for machine-hire and custom work (15 percent), labor (13 percent), fertilizers and chemicals (10 percent), repairs and maintenance (8 percent), and seed and plants (7 percent). These larger-than-average increases were offset by lower-than-average increases for feed, other livestock expenses, and interest on real estate debt (all less than 1 percent) and decreases in other expense items, including livestock purchases, utilities, transportation and storage, and rental and lease payments.

Lower depreciation expenses combined with greater net additions to inventories spurred the gains in net farm income. Farm operations with gross sales above \$40,000 had an average net farm income of \$53,942 in 1989, which was three times the average for all farms. About a third of all farms had gross sales above \$40,000. Most operators of these farms considered farming their primary occupation. Operations, including some of the largest, often support more than one household. Average net farm income increased by \$18,000 (50 percent) for farms with sales above \$40,000. Factors responsible for the higher earnings of these larger farm operations mirrored those of all farms.

The Appalachian, Delta, and Southern Plains were the only regions with average net farm income below the 1989 average for all farms. These same regions, with the exception of the Delta, were in a similar position in 1988 along with the Corn Belt. Average net farm income increased by the largest percentage in the Southern Plains, Southeast, and Corn Belt. The Northern Plains was the only region where the

### Net Cash Farm Income

Reflects current or short-term cash earnings. This measure is the cash available to farm operations after paying all cash expenses (including interest) for living expenses, principal repayment, income taxes, and other expenses or reinvestment in the farm business. It does not reflect the cash position of farm families because savings, wages paid to family members, and off-farm earnings are not included.

### Net Farm Income

Reflects profits or long-term earnings. This measure is equal to net cash income less depreciation plus the value of inventory change and nonmoney income. This measure reflects the return or loss to operator and unpaid family labor, management, and equity capital associated with a current year's production. Over time, net farm income shows the farm's ability to survive as a viable business.

average net farm income of farm operations declined. Average net cash income of farm operations ranged from \$4,388 in the Appalachian region to \$24,516 in the Pacific. The Appalachian region also had the lowest average net cash income in 1988, while the Northern Plains had the highest. Average net cash income increased in all but the Lake States, Northern Plains, and Appalachian regions.

Farm operations that specialized in the production of cotton, nursery and greenhouse products, and

poultry had the highest average net farm income in both 1988 and 1989. Average net farm income increased for all production specialties. The largest gains, in percentage terms, occurred for cotton and dairy farms. Tobacco; other field crops; beef, hog, and sheep; and other livestock (other than beef, hogs, sheep, dairy, and poultry) farms had average net farm income below the 1989 average for all farms. Average net cash income declined for operations that specialized in the production of nursery and greenhouse products and poultry.

**Table 1—Farm operator income statement for all farms and for farms with gross sales above \$40,000, 1988-89**  
Higher incomes helped to improve the financial performance of farms.

Item	All farms		Gross sales of \$40,000 or more	
	1988	1989	1988	1989
<i>Dollars per farm</i>				
Gross cash farm income	63,406	68,176	179,161	199,915
Livestock sales	30,313	31,732	85,793	92,970
Crop sales (including net Commodity Credit Corporation loans)	24,095	27,524	69,131	82,695
Government payments	5,113	3,979	14,531	11,210
Other farm-related income <sup>1</sup>	3,885	4,941	9,706	13,040
<b>Less: Cash expenses</b>	<b>51,766</b>	<b>53,000</b>	<b>139,139</b>	<b>147,179</b>
Variable—				
Livestock purchases	7,089	6,908	19,992	20,249
Feed	7,723	7,784	21,595	22,459
Veterinary services and supplies	745	846	1,971	2,348
Other livestock-related expenses <sup>2</sup>	407	408	1,147	1,188
Seed and plants	1,953	2,092	5,439	5,961
Fertilizers and chemicals	5,547	6,082	15,427	17,429
Labor	4,923	5,558	14,546	17,006
Fuel and oil	2,473	2,535	6,294	6,654
Repairs and maintenance	3,816	4,133	9,243	10,483
Transportation and storage	1,684	864	4,848	2,639
Rent and lease payments	2,976	2,905	8,596	8,511
Machine-hire and custom work	930	1,072	2,351	2,787
Interest on operating loans	1,495	1,596	4,221	4,658
Utilities	1,927	1,852	4,427	4,867
Other variable expenses <sup>3</sup>	1,876	1,874	4,810	4,848
Fixed—				
Real estate and property taxes	1,555	1,661	3,109	3,383
Interest on real estate debt	3,241	3,256	7,783	7,809
Insurance premiums	1,407	1,574	3,339	3,900
<b>Equals: Net cash farm income</b>	<b>11,640</b>	<b>15,176</b>	<b>40,022</b>	<b>52,737</b>
<b>Less: Depreciation</b>	<b>5,526</b>	<b>4,632</b>	<b>14,314</b>	<b>12,812</b>
<b>Plus:</b>				
Value of inventory change	2,459	4,559	7,026	10,685
Nonmoney income <sup>4</sup>	2,861	3,032	2,871	3,333
<b>Equals: Net farm income</b>	<b>11,434</b>	<b>18,134</b>	<b>35,554</b>	<b>53,942</b>

<sup>1</sup>Includes income from: machine-hire, custom work, livestock grazing, land rental, contract production fees, outdoor recreation, and any other farm-related income. <sup>2</sup>Includes livestock leasing, custom feed processing, bedding, and grazing. <sup>3</sup>Includes supplies, registration fees, and general business expenses. <sup>4</sup>Defined as the value of home consumption and imputed rental value of farm dwellings.

Source: Farm Costs and Returns Surveys, USDA.

**Higher cash earnings resulted from higher commodity sales offsetting lower direct Government payments and higher operating expenses.**

**Higher net farm income resulted from lower depreciation expenses and additions to inventories.**

## More Farms Were Profitable Than a Year Ago

**More farms had positive net farm income in 1989 (69 percent) than in 1988 (64 percent). The proportion of farms with positive net farm income rose for all sizes of farms, for farms in the eastern half of the Nation, and for all but two production specialties.**

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Changes in the distribution of farms by net farm income since 1988 occurred only at the extreme ends of the size categories, with a 6-percentage-point decrease in the proportion of farms with negative income and a 3-percentage-point increase in the share of farms with net farm incomes of \$40,000 or more (table 2). Sixty-nine percent of farms had a positive net farm income in 1989, compared with 64 percent in 1988. In 1989, 13 percent of all farms had net farm incomes of \$40,000 or more, up from 10 percent in 1988. More than half of all farms had net farm income between \$0 and \$39,999 in both 1988 and 1989.

The distribution of farms by net farm income category was directly related to farm size, as measured by gross sales. More than half of farms with gross sales above \$250,000 had net farm income of \$40,000 or more. In contrast, at least 79 percent of farms with sales below \$40,000 had net farm income under \$20,000. In 1989, the percentage of farms with negative net farm income ranged from 17 percent in the \$100,000-\$249,999 economic class to 38 percent in the smallest class. The proportion of farms with positive net farm income increased for all sizes of farms. The largest increase occurred in the \$20,000-\$39,999 economic class (12 percentage points), followed by the \$100,000-\$249,999 class (8 percentage points). The share of farms with net farm income of \$40,000 or more increased by 12 percentage points in both the \$500,000 or more and the \$100,000-\$249,999 economic classes.

Less than 10 percent of farm operations in the Appalachian, Southeast, Delta, and Southern Plains regions had net farm income equaling or exceeding \$40,000. The Northern Plains was the only region where the percentage of farms with net farm income of \$40,000 or more declined. The Pacific had the lowest share of farms with positive net farm income (55 percent), followed by the Southern Plains (61 percent). The percentage of farms with positive net farm income declined in the Northern Plains, Delta, Mountain, and Pacific regions between 1988 and 1989. The largest increases in the percentage of profitable farms occurred in the Lake States, Corn Belt, Northeast, and Appalachian regions.

Dairy and tobacco operations led all production specialties, with 85 percent earning positive net farm income. Over a third of cotton and dairy operations earned \$40,000 or more in net farm income in 1989. Farms specializing in the production of livestock other than beef, hogs, sheep, dairy, and poultry (other livestock) accounted for the lowest share of farms with positive net farm income in both 1988 and 1989. The largest increases in the percentage of farms with positive net farm income were for other livestock, dairy, nursery and greenhouse, and tobacco farms. Farms that specialized in the production of vegetables, fruit, or nuts, and other field crops were the only types of farms that experienced a decline in the share of profitable farms. The proportion of farms with net farm income of \$40,000 or more increased for all farm types except nursery and greenhouse, which remained constant over the period.

**Table 2—Distribution of farms by net farm income category, 1988-89**

*The proportion of farms with negative net farm income fell in 1989 after rising in 1988. The distribution of farms by net farm income was directly related to farm size: farms with the highest gross sales captured the largest profits.*

Item	Net farm income							
	Negative		\$0-\$19,999		\$20,000-\$39,999		\$40,000 or more	
	1988	1989	1988	1989	1988	1989	1988	1989
	Percent							
All farms	36.34	30.77	45.82	46.98	7.86	9.20	9.98	13.06
Economic class:								
Sales \$500,000 or more	26.62	20.42	5.26	1.97	5.67	3.58	62.44	74.03
Sales \$250,000-\$499,999	25.95	19.54	7.19	4.97	9.51	10.92	57.35	64.57
Sales \$100,000-\$249,999	25.01	16.77	17.38	14.24	19.96	19.15	37.66	49.85
Sales \$40,000-\$99,999	28.75	21.80	35.53	28.24	23.60	30.09	12.12	19.87
Sales \$20,000-\$39,999	38.88	27.00	47.61	51.83	11.37	16.25	d	d
Sales \$10,000-\$19,999	38.94	32.98	58.38	61.23	d	d	d	d
Sales under \$10,000	41.65	38.35	57.74	60.81	d	d	d	d
Region:								
Northeast	40.27	30.63	43.17	45.65	7.67	9.73	8.89	13.99
Lake States	37.87	24.90	39.95	43.81	10.09	14.38	12.10	16.91
Corn Belt	36.52	26.32	42.46	43.18	9.84	14.72	11.19	15.78
Northern Plains	27.46	30.12	37.16	39.33	16.45	13.69	18.93	16.86
Appalachian	32.74	23.67	58.02	64.19	4.16	5.16	5.08	6.97
Southeast	35.72	28.76	53.67	57.00	4.08	5.18	6.53	9.07
Delta	31.28	34.51	54.77	51.99	5.08	3.85	8.86	9.66
Southern Plains	43.94	39.32	43.01	45.98	7.02	6.05	6.02	8.65
Mountain	32.38	33.31	45.87	39.07	8.03	8.87	13.71	18.75
Pacific	42.85	45.11	38.37	35.49	5.30	4.08	13.48	15.31
Production specialty:								
Cash grains	32.68	27.09	39.28	42.75	11.27	11.79	16.77	18.37
Tobacco	24.06	15.50	66.02	70.82	4.88	4.87	5.03	8.81
Cotton	25.14	24.62	33.58	14.33	14.83	20.00	26.44	41.05
Other field crops	28.48	31.24	59.35	53.70	5.84	4.78	6.33	10.28
Vegetables, fruit, nuts	32.60	35.18	47.86	40.89	6.45	8.69	13.09	15.24
Nursery, greenhouse	40.91	29.49	33.84	41.49	7.58	11.18	17.67	17.84
Beef, hogs, sheep	40.70	34.10	49.10	53.11	5.06	6.33	5.15	6.46
Poultry	28.14	23.06	30.76	30.26	13.76	14.09	27.34	32.59
Dairy	26.50	14.46	30.06	23.86	20.96	25.99	22.48	35.68
Other livestock	62.57	48.57	32.87	42.11	2.32	3.88	2.24	5.44

d = Data insufficient for disclosure.

Source: Farm Costs and Returns Surveys, USDA.

**These compare with 32.1 percent of farms with negative net farm income in 1987.**

## **Rising Asset Values Coupled With Debt Stability Strengthened the Solvency Position of Farms**

**While debt owed by farm operators remained similar to levels at the end of 1988, rising asset values improved the 1989 balance sheet for farm operators.**

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Farmers who reported \$7.46 in assets for every \$1 of debt in 1988 reported \$8.42 in 1989 (table 3). This indicates that lenders had more collateral underpinning their agricultural loans at the end of 1989 than a year earlier. Farm operators had average debt of \$48,018 and assets of \$404,209 in 1989, resulting in an average debt/asset ratio of 0.12. The debt/asset ratio has been declining since 1986, when it peaked at 0.22. The average debt/asset ratio in 1988 was 0.13. On average, the value of assets owned by farm operators increased by 12 percent, while debt remained similar to 1988 levels. Most of the increase in total assets was associated with real estate values, which represented over 70 percent of total assets. The value of farm equipment, livestock inventory, and crop inventory each rose about \$2,000 over 1988 levels. The value of purchased inputs, the smallest asset category, declined by \$450, while other assets (which consist primarily of liquid assets, such as savings, and accounts receivable) fell by nearly \$5,000.

Farm operators with sales over \$40,000 reported asset values that exhibited changes comparable with those for all farms. For these operators, as for all operators, the increased value of land and buildings was the primary reason that the value of assets, and consequently equity, in the farm business rose in 1989.

The average amount of debt owed by farm operators was unchanged since the end of 1988. But even though the amount remained the same, the composition of the debt changed. A larger share of outstanding loans at the end of 1989 had original repayment terms of 10 or fewer years (that is, more nonreal estate debt). This short- and intermediate-term debt is predominantly used to purchase inputs, livestock, or capital equipment such as trucks and tractors. This apparent trend toward the use of short- and intermediate-term debt is consistent with the growth in loans by commercial banks and implement dealers along with the decline in the agricultural real estate loan volume of lenders such as Farm Credit System banks.

Equity (or net worth), the difference between assets and debt, continued to recover from the erosion that took place in the early 1980's. Since 1988, the average equity of farm operations represented in the survey increased by 14 percent. In 1989, farmers had an average of \$7.42 of equity for each \$1 of debt. Farmers with sales of \$40,000 or more reported \$5.86 of equity for each \$1 in debt, reflecting the greater tendency of these larger businesses to use borrowed funds (debt capital) instead of savings or other internal sources of funds.

**Table 3—Farm operator balance sheet for all farms and for farms with gross sales above \$40,000, 1988-89**

*Large farms, like all farms, improved their solvency position in 1989 even though, on average, the level of debt remained the same. Reduced real estate debt and higher real estate values were behind the higher net worth.*

Item	All farms		Gross sales of \$40,000 or more	
	1988	1989	1988	1989
<i>Dollars per farm</i>				
Farm assets <sup>1</sup>	359,575	404,209	670,675	799,111
Land and buildings	236,469	288,056	398,993	540,609
Farm equipment	39,140	41,425	90,705	96,908
Livestock inventory	27,219	29,205	65,126	71,970
Crop inventory	9,469	11,791	27,293	33,807
Purchased inputs	1,841	1,387	5,192	4,070
Other assets	31,861	26,904	49,247	42,034
Farm operator debt	48,232	48,018	116,590	116,450
By lender:				
Farm Credit System	19,588	18,506	51,445	48,659
Commercial banks	19,248	20,267	41,672	44,906
Other	9,396	9,244	23,473	22,885
By original term of loan:				
Less than 1 year	4,788	5,478	13,775	15,656
1-10 years	15,619	17,282	38,645	43,080
More than 10 years	27,825	24,259	64,171	55,036
Commodity Credit Corporation crop loans <sup>2</sup>	2,052	1,098	6,250	3,520
Net worth	311,343	356,191	554,085	682,661
<i>Ratio</i>				
Debt/asset ratio	0.13	0.12	0.17	0.15

<sup>1</sup>Data may not sum to total because not all farms provided detailed components. <sup>2</sup>Outstanding Commodity Credit Corporation crop loans were excluded from both assets and debt.

## **There Were Fewer Farms With High Debt, While Nearly Half of Farms Had No Debt at the End of 1989**

**The share of farms with debt/asset ratios above 0.40 fell by 3 percentage points since 1988 to 11 percent at the end of 1989. This reflects a continuation of the downward trend that began in 1986, when over 20 percent of farms were in this position.**

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Farms with debt/asset ratios above 0.40 owed 45 percent of the total farm debt, compared with 51 percent in 1988 and 67 percent in 1986 (table 4). At the other extreme of leverage positions, 48 percent of farms ended 1989 with no outstanding liabilities, the same proportion as in 1988.

The incidence of debt is directly related to farm size. Only 17 percent of the largest farms (over \$500,000 in gross sales) had no yearend farm business debt (fig. 2). In contrast, over 60 percent of farms with sales below \$10,000 had no farm business debt at the end of 1989. The Northeast, Appalachian, Southeast, and Southern Plains regions had less than 10 percent of farms with debt/asset ratios above 0.40. Cotton, poultry, and dairy farms were more inclined to use debt capital, as reflected by 70 percent having debt at the end of 1989--a much higher percentage than other production specialties.

The share of high-debt (debt/asset ratio above 0.40) farms declined by the largest amount in the Lake States, Corn Belt, and Pacific regions. The share of farms with low debt (debt/asset ratio of 0.01-0.40)

also increased the most in these regions. Considering production specialty, the largest decreases in the proportion of farms with high debt occurred on cash grain; vegetable, fruit, and nut; dairy; and nursery and greenhouse operations. The share of high-debt cotton and nursery and greenhouse operations rose from 1988 to 1989.

On average, the level of debt and assets is also closely associated with farm size. For example, at the end of 1989, low-debt farms with gross sales of \$500,000 or more had over \$362,000 in outstanding liabilities and \$2,587,000 in assets. In contrast, low-debt farms with under \$10,000 in sales had \$23,000 in average debt and \$181,611 in assets. Low-debt farms in the Pacific, Mountain, and Northeast regions had the highest average asset values at the end of 1989.

Farms specializing in the production of other livestock; vegetables, fruit, and nuts; cotton; dairy; and nursery and greenhouse products had the highest average assets at the end of 1989.

**Table 4—Distribution of farms and debt by debt/asset ratio category**

*More farms had no outstanding liabilities and fewer farms were highly leveraged by the end of 1989, a continuation of the general improvement in the solvency position of farm operations that began in 1986.*

Year	Debt/asset ratio						
	No debt	0.01-0.40		0.41-0.70		Above 0.70	
	Farms	Farms	Debt	Farms	Debt	Farms	Debt
	<i>Percent</i>						
1989	48.1	40.7	55.5	7.9	29.8	3.3	14.7
1988	47.9	38.4	49.0	9.2	31.6	4.5	19.4
1987	43.9	41.2	45.2	10.0	31.4	4.9	23.4
1986	38.9	39.5	32.9	13.0	34.0	8.6	33.1
1985	39.5	39.2	33.7	12.7	32.9	8.6	33.4
1984	na	na	38.1	11.6	32.9	7.3	29.0

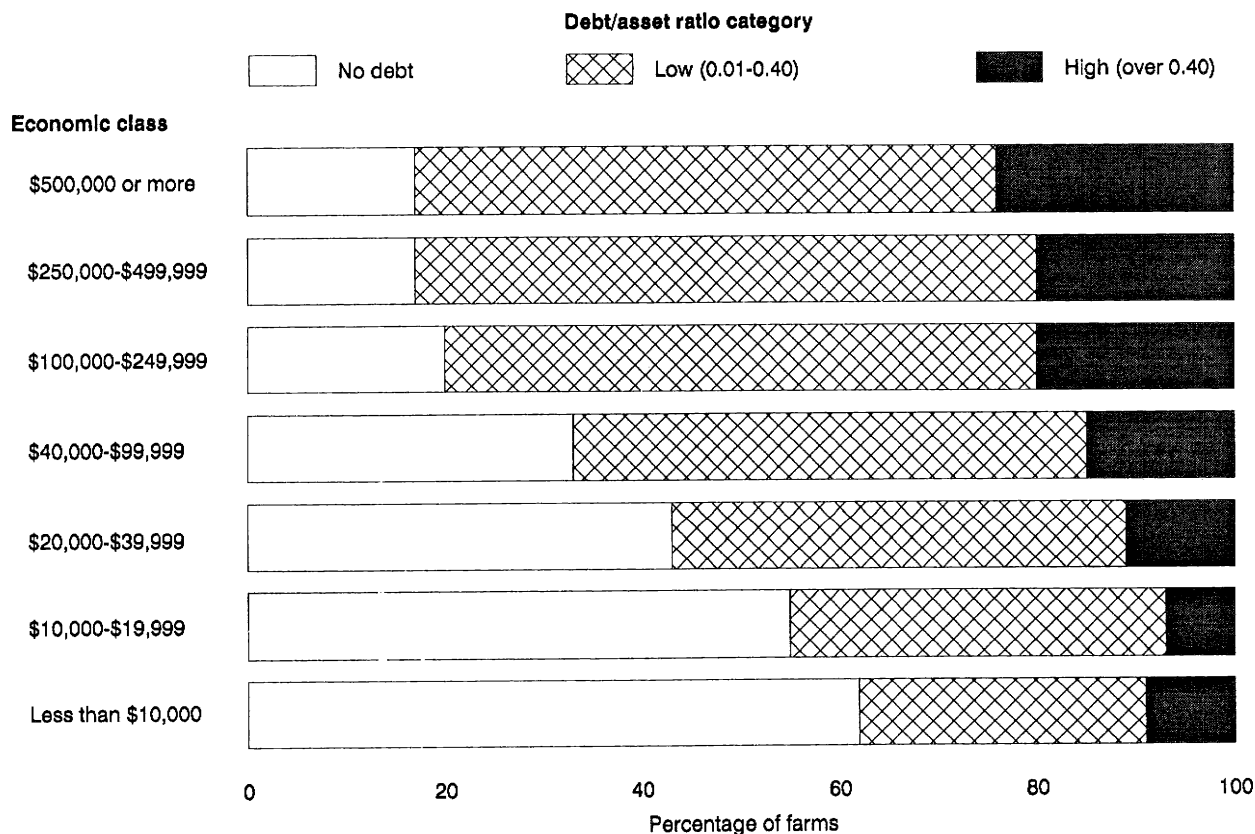
na = Not available.

Source: Farm Costs and Returns Surveys, USDA.

Figure 2

**Distribution of farms by debt/asset ratio and economic class**

*The distribution of debt, like that for farm income, is related to farm size. Larger farms, for example, are likely to hold the most debt relative to assets.*



## Defining Farm Operator Financial Performance

No single measure of financial performance can capture all variations in a farm's financial position. Thus, we combine net income and debt/asset ratio position to reflect four categories of financial situations.

The financial performance of farm operations can be evaluated by considering their combined net income and solvency positions as measured by debt and assets. Cash-based income measures show the ability of a farm business to meet current debt service commitments and pay family living expenses after all cash-based business expenses have been paid. Net farm income (which includes adjustments for changes in inventory and depreciation) permits a longer term assessment of earnings potential and reveals a farm's ability to generate profits. Solvency, as measured by the debt/asset ratio, reflects owner equity in the farm business and financial risk associated with the operation.

Both the debt/asset ratio (a measure of business solvency) and net farm income (a measure of profitability) have limitations when considered independently. A high debt/asset ratio may be acceptable if a farm generates enough income to service debt and meet other financial obligations. Periods of low or negative income, similarly, may not pose major financial difficulties if the operation is carrying a low debt load and can either borrow against equity or use other sources of income outside the farm business. To reflect this range of financial situations, we use a framework based on the farm business's combined income and debt/asset ratio position. Farm operations are classified by one of four income/solvency positions (fig. 3).

Figure 3

### Joint distribution of farm operations by income and solvency position

Income measure	Debt/asset ratio	
	Low (0.0-0.40)	High (above 0.40)
Positive income		
Net farm income (NFI)	<i>Favorable</i>	<i>Marginal solvency</i>
Net cash farm income (NCFI)		
Negative income		
Net farm income (NFI)	<i>Marginal income</i>	<i>Vulnerable</i>
Net cash farm income (NCFI)		

## Extending Financial Performance Measures To Represent Official Farm Numbers

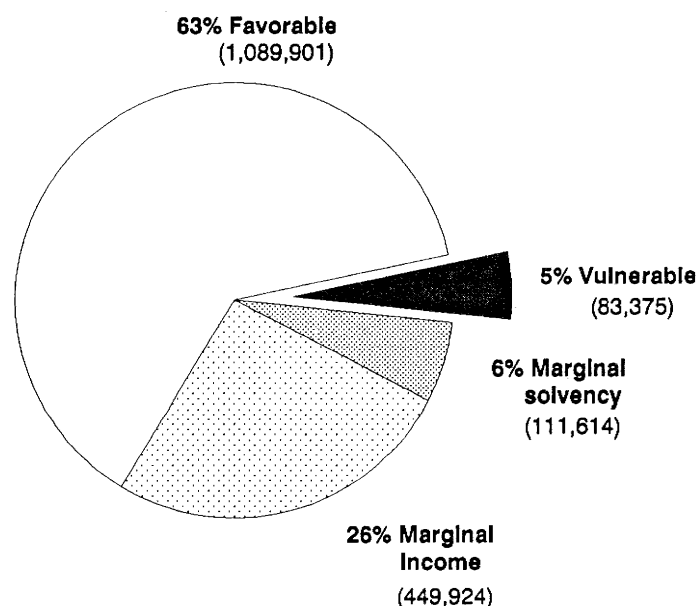
The 1989 FCRS accounted for 80 percent of the total number of farms officially reported by the U.S. Department of Agriculture (USDA). To extend financial performance indicators from the survey to represent all farms, the original FCRS sample data were weighted by the ratio of USDA farms to the FCRS number by economic class.

This procedure assumes that farms not counted by the FCRS had a similar financial performance by economic class to those counted by the 1989 FCRS. As in past years, most of the difference between the official farm numbers and the FCRS numbers were for the smallest economic classes. For example, the FCRS-expanded number of farms is equal to 96 percent of the USDA number of farms with gross sales above \$100,000 and 85 percent of those with sales over \$40,000. The FCRS generates an ex-

panded estimate equal to 78 percent of USDA farms with sales under \$40,000.

The adjusted data indicate that 5 percent of U.S. farms were in a vulnerable financial position in 1989 (see chart below), down from 7 percent a year earlier. This means that about 83,000 farm operations were classified as vulnerable in 1989, lower than the 156,000 farms in 1988 and much lower than the 249,000 farms estimated for 1986. This extended perspective of financial performance suggests that 45 percent of vulnerable farms had sales below \$5,000. There was also a large concentration of vulnerable farms in the Corn Belt, Lakes States, Northern Plains, and Pacific regions. Cash grain and beef, hog, and sheep production specialties accounted for over 70 percent of vulnerable farms.

**Estimated distribution of all farms by financial position, 1989**



Source: FCRS net farm income and solvency classifications weighted by the USDA estimate of farm numbers.

### Economic class:

\$250,000 or more	6,155
\$100,000-\$249,999	8,851
\$40,000-\$99,999	9,273
\$20,000-\$39,999	8,621
\$10,000-\$19,999	6,588
\$5,000-\$9,999	6,957
Less than \$5,000	36,931

### Production specialty:

Cash grains	21,633
Tobacco	1,957
Cotton	834
Other field crops	6,485
Vegetables, fruit, nuts	2,953
Nursery, greenhouse	1,679
Beef, hogs, sheep	37,628
Poultry	2,646
Dairy	3,433
Other livestock	4,107

### Production region:

Northeast	2,737
Lake States	11,573
Corn Belt	15,192
Northern Plains	11,291
Appalachian	7,867
Southeast	3,949
Delta	4,610
Southern Plains	7,942
Mountain	6,930
Pacific	11,284

## Farm Businesses End the Decade With Strong Financial Performance

The 1986-87 period saw the largest gains in performance when the proportion of favorable farms increased by 12 percentage points and the share of vulnerable operations dropped in half. The most recent improvement in financial performance reflects a resurgence in farm income following 1988's drought and increasing real estate values over the last 4 years.

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While the share of farms with debt/asset ratios over 0.40 continued to fall in 1989 (table 4), the share of farms with positive net farm income increased from 64 percent to 69 percent (table 2). The increase in the share of profitable farms in 1989 resumes the upward trend that had been interrupted by 1988 drought conditions. The resumption of the general improvement in farm financial performance is also apparent when farms are classified by their combined income and solvency position (table 5).

In 1989, the performance measures based on net farm income showed that 63 percent of farms were in a favorable financial position, a 6-percentage-point increase from 1988. These profitable, low-leverage businesses were able to take advantage of investment or expansion opportunities. A combination of negative income and high debt resulted in 5 percent of farms being categorized as vulnerable, down from 7 percent in 1988. These businesses may require significant adjustments to their operations to remain financially viable.

While the net farm income and net cash farm income indicators of financial performance each showed

about 5 percent of farms in a vulnerable financial position, the two measures show a much different percentage of farms in a favorable position (63 percent and 49 percent, respectively). This result is due to differences in how the two items measure income. Net cash income simply measures the amount of cash flowing into the business less cash expenses paid to operate the business during the year. Net farm income adjusts net cash income to account for depreciation expenses, changes in inventories, and nonmoney income earned by the business (such as home consumption of commodities and the imputed rental value of the farm dwelling). The more comprehensive earnings measure, net farm income, shows a higher percentage of farms in a favorable financial position. This is due almost entirely to the improved profitability of farms with sales under \$100,000 when the value of goods and services produced and consumed on the farm is included in the measure of income. In addition, some larger farm businesses with negative net cash income may have a positive net farm income if the commodities produced are stored for future sales (additions to inventory are treated as additions to the current year's net farm income).

**Table 5—Distribution of farm operations by financial position**

*More farms were in a favorable financial position and fewer were financially vulnerable, regardless of the income measure used.*

Income measure and survey year	Favorable	Marginal income	Marginal solvency	Vulnerable
<i>Percent</i>				
Net farm income:				
1989 FCRS	62.8	26.0	6.4	4.8
1988 FCRS	57.0	29.4	6.7	6.9
1987 FCRS	59.1	25.9	8.8	6.2
1986 FCRS	47.1	31.3	10.0	11.6
Net cash farm income:				
1989 FCRS	48.8	39.9	5.7	5.6
1988 FCRS	46.0	40.4	6.8	6.8
1987 FCRS	48.5	36.5	8.2	6.8
1986 FCRS	41.0	37.0	11.7	9.9
1985 FCRS	40.4	38.3	11.3	10.0
1984 FCRS	40.8	40.1	9.2	9.9

Source: Farm Costs and Returns Surveys, USDA.

Both indicators show about 5 percent of farms in a vulnerable financial position.

A larger percentage of farms are categorized as favorable when using net farm income because it is a more comprehensive measure of annual earnings that considers the net change in the value of inventories, depreciation, and nonmoney income.

## Farm Income Statement and Balance Sheet

**Farm businesses in a vulnerable position had fewer assets per dollar of debt than did other farms, meaning that, on average, vulnerable farms were more highly leveraged and had a lower net worth. Vulnerable farms had 3 percent of assets but held 17 percent of debt, compared with 65 percent of assets and 38 percent of debt for favorable farms.**

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The income structure of farms at both extremes of financial performance did not differ dramatically. Vulnerable farms earned \$66,648 in average gross cash income, compared with \$72,434 for operations classified in a favorable position (app. table 1). Most of the difference between the gross income of these groups was attributed to crop sales. Marginally solvent farms had the highest average gross cash income, reflecting the tendency for large farms to be more highly leveraged than small farms. The lowest gross income was for farms in the marginal income category. Livestock sales were a much higher share of total commodity sales (livestock plus crop sales) on marginal operations than on favorable or vulnerable operations.

Total cash expenses of vulnerable farms were nearly twice as high as for favorable farms. The most notable difference in expense items was interest. Interest represented 16 percent of total cash expenses for vulnerable farms, compared with just 7 percent for favorable operations. Other large differences existed for rent and lease payments, livestock purchases, and feed. Farm operations in the marginal solvency category had the highest average net farm income in both 1988 and 1989, suggesting that for some farms the use of debt capital can provide positive returns.

The value of total assets on December 31, 1989, ranged from \$257,761 for vulnerable operations to \$417,824 for favorable farms (table 6). In addition to

the level of total assets, the composition of assets differed between these categories. Land and buildings represented 71 percent of total assets for favorable farms, compared with 66 percent for vulnerable operations. About 25 percent of vulnerable farms' total assets, on average, were farm equipment and livestock inventory, while these items amounted to only 18 percent of total assets for favorable farms. A somewhat surprising finding is that farms classified as vulnerable reported a smaller share of debt with an original loan term of under 1 year (8 percent) than either other highly leveraged farms (11 percent) or favorable farms (13 percent).

One measure of liquidity (the ability to convert assets into cash) is the relationship between longevity of farm assets and length of term associated with corresponding liabilities. The balance sheet information for highly leveraged farms (in a vulnerable or marginally solvent position) indicated that these farms own approximately \$3 to \$4 in current assets (inventories, purchased inputs, and other assets) for each \$1 in current liabilities (loans maturing in 1 year or less). This compares with about \$20 for farms in a favorable position. For intermediate- and long-term loans, the highly leveraged farms reported only \$1 to \$2 of assets per dollar of debt, compared with about \$14 for favorable operations. Therefore, if farms in a vulnerable position encounter poor earnings for more than 1 year, they may experience extreme difficulty in repaying and/or servicing existing debt.

**Table 6—Farm operator balance sheet by financial position, 1988-89<sup>1</sup>**

*Financially favorable operations were better able to service debt, increased their net worth, and retained much higher assets per dollar of debt.*

Item	Favorable		Marginal income		Marginal solvency		Vulnerable	
	1988	1989	1988	1989	1988	1989	1988	1989
<i>Percent</i>								
Farms	56.91	62.78	29.50	25.95	6.65	6.45	6.94	4.82
<i>Dollars per farm</i>								
Farm assets <sup>2</sup>	376,921	417,824	361,625	411,811	312,823	350,422	253,162	257,761
Land and buildings	245,127	297,282	248,068	306,544	185,827	212,565	164,728	169,200
Farm equipment	40,120	42,412	34,461	35,788	53,145	55,848	37,463	39,626
Livestock inventory	28,104	30,918	22,332	21,726	42,056	46,138	26,400	24,524
Crop inventory	11,531	13,476	4,993	6,459	14,421	18,383	6,748	9,740
Purchased inputs	1,938	1,501	1,358	833	2,829	2,781	2,148	1,021
Other assets	35,171	27,479	34,575	31,485	13,028	14,249	11,237	11,659
Farm operator debt	25,868	28,907	30,205	32,836	198,593	206,610	164,036	166,657
By lender:								
Farm Credit System	9,782	10,634	10,674	10,097	90,548	91,421	69,808	68,828
Commercial banks	10,374	11,828	13,782	16,058	71,059	81,196	65,591	71,403
Other	5,712	6,444	5,749	6,682	36,986	33,994	28,637	26,426
By original term of loan:								
Under 1 year	3,429	3,655	2,622	4,347	17,403	22,099	13,022	13,474
1-10 years	8,935	11,316	10,103	12,611	62,016	67,478	49,368	64,060
Over 10 years	13,504	13,936	17,479	15,878	119,174	117,033	101,646	89,123
Commodity Credit Corporation crop loans <sup>3</sup>	1,746	954	1,077	850	6,520	2,354	4,402	2,618
Net worth	351,053	388,918	331,420	378,975	114,230	143,812	89,125	91,104
<i>Ratio</i>								
Debt/asset ratio	0.07	0.07	0.08	0.08	0.63	0.59	0.65	0.65
<i>Percent</i>								
Share of debt	30.56	37.79	18.43	17.74	27.45	27.75	23.56	16.72
Share of assets	59.74	64.69	29.58	26.54	5.81	5.58	4.89	3.07

<sup>1</sup>Based on combined net farm income and debt/asset ratio position. <sup>2</sup>Data may not sum to total because not all farms provided detailed components. <sup>3</sup>Outstanding Commodity Credit Corporation crop loans were excluded from both assets and debt.

Source: 1988 Farm Costs and Returns Survey, USDA.

## Farm Operation Characteristics

**The percentage of farms classified as financially vulnerable declined since 1988 for all sizes of farms, regions, and production specialties.**

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In 1988 and 1989, the highest relative financial vulnerability occurred on farms with gross sales above \$250,000, on farms in the Pacific region (second highest relative vulnerability in 1989), and on farms specializing in the production of poultry products (table 7). In 1989, however, there was a smaller share of vulnerable operations for all economic classes of farms, regions of the country, and production specialties.

Roughly two-thirds of farms were classified as favorable except for the largest (\$500,000 or more in gross sales) and smallest (less than \$20,000 in gross sales) economic classes. The share of farms classified as vulnerable ranged from 3 percent for the \$10,000-\$19,999 class to 6 percent for the \$250,000-\$499,999 class. Farm operations with gross sales above \$40,000 were more likely to be classified as marginally solvent than were farms with lower sales. The larger farm operations tended to make heavier use of debt capital. Earnings difficulties plagued farm businesses with gross sales below \$40,000, as evidenced by the relatively larger percentages in the marginal income category.

The Appalachian, Corn Belt, and Southeast regions had the highest percentage of farm operations classified as favorable. The largest shares of vulnerable farms were in the Northern Plains, Pacific, Mountain, and Lake States. In 1988, the Pacific, Lake States, Northern Plains, and Corn Belt had the highest percentage of farms in this position. The most sizable increases in the share of favorable farms occurred in the Lake States (14 percentage

points) and Corn Belt (11 percentage points). The percentage of farms classified as favorable declined in the Northern Plains, Delta, Mountain, and Pacific regions.

In 1989, dairy and tobacco farms were in the strongest overall financial position, having the lowest percentage classified as vulnerable and the highest share classified as favorable. The largest shares of vulnerable farms were poultry, cash grain, nursery and greenhouse, and other field crop operations. The percentage of farms classified as vulnerable declined for all production specialties. The largest reductions occurred on poultry (7 percentage points) and vegetable, fruit, and nut operations (5 percentage points). Cotton, other field crops, and vegetables, fruit, and nuts were the only production specialties in which the percentage of favorable farms declined since 1988.

For vulnerable farms, 20 cents of each dollar of gross earnings in 1989 went to pay interest on debt. This was about twice the amount paid by marginally solvent farms and four times the amount paid by favorable operations. Farm operators on highly leveraged operations were younger and had a higher-than-average level of formal education. Farms in the marginal solvency category operated the largest average acreage, but owned the smallest share of that acreage. In a change from 1988, farms classified as vulnerable were the smallest farms in terms of acreage operated. Nearly half of all farms classified as vulnerable sold below \$10,000 in farm products, but this group of farms traditionally operates small acreages.

**Table 7—Farm operation characteristics by financial position, 1988-89**

*Fewer farms in each sales class, region, and production specialty were classified as financially vulnerable in 1989. Farms most vulnerable were those with sales above \$250,000, farms in the Northern Plains and Pacific regions, and those specializing in poultry production.*

Item	Favorable		Marginal income		Marginal solvency		Vulnerable	
	1988	1989	1988	1989	1988	1989	1988	1989
<i>Percent</i>								
Farms	56.91	62.78	29.50	25.95	6.65	6.45	6.94	4.82
Operator's primary occupation farming	60.64	59.03	47.12	46.81	73.59	71.48	49.22	38.08
Economic class:								
Sales \$500,000 or over	54.93	60.76	17.80	14.81	18.44	18.82	8.83	5.61
Sales \$250,000-\$499,999	58.94	66.39	17.62	13.23	15.11	14.07	8.33	6.31
Sales \$100,000-\$249,999	59.03	67.76	17.14	12.18	15.96	15.47	7.87	4.60
Sales \$40,000-\$99,999	59.87	67.43	20.36	17.88	11.39	10.77	8.39	3.93
Sales \$20,000-\$39,999	54.65	67.90	31.42	22.21	6.47	5.10	7.46	4.80
Sales \$10,000-\$19,999	56.36	63.32	34.67	29.90	4.70	3.69	4.27	3.09
Sales under \$10,000	56.22	58.74	35.06	32.92	2.13	2.91	6.59	5.43
Region:								
Northeast	54.71	64.66	35.03	28.35	5.02	4.71	5.24	2.28
Lake States	51.41	65.52	28.36	18.85	10.73	9.58	9.50	6.05
Corn Belt	56.29	67.30	28.77	21.57	7.19	6.37	7.75	4.75
Northern Plains	60.03	57.99	19.53	22.88	12.51	11.89	7.93	7.24
Appalachian	63.33	72.34	28.30	20.45	3.93	3.98	4.44	3.22
Southeast	59.35	67.09	32.09	25.84	4.92	4.15	3.63	2.92
Delta	64.43	59.20	25.47	29.48	4.29	6.29	5.81	5.03
Southern Plains	50.41	55.67	37.31	35.55	5.65	5.01	6.63	3.76
Mountain	59.90	58.76	24.67	26.74	7.72	7.93	7.71	6.57
Pacific	52.25	49.35	31.39	37.92	4.90	5.54	11.46	7.19
Production specialty:								
Cash grains	56.28	64.15	24.29	21.18	11.04	8.76	8.40	5.91
Tobacco	71.61	77.61	17.07	12.32	4.33	6.89	6.99	3.18
Cotton	64.95	56.78	19.16	19.76	9.91	18.60	5.98	4.86
Other field crops	63.73	61.59	19.18	25.87	7.79	7.17	9.30	5.38
Vegetables, fruit, nuts	63.68	60.96	24.26	31.83	3.72	3.86	8.34	3.34
Nursery, greenhouse	55.35	60.38	31.44	23.77	3.74	10.13	9.47	5.72
Beef, hogs, sheep	55.39	62.38	35.23	29.22	3.91	3.53	5.47	4.88
Poultry	54.53	60.11	14.10	15.63	17.33	16.83	14.04	7.44
Dairy	59.07	72.29	19.78	11.91	14.43	13.25	6.72	2.55
Other livestock	34.28	45.77	53.98	44.70	3.15	5.67	8.59	3.86
<i>Acres per farm</i>								
Acreage:								
Owned	293	298	253	265	266	240	218	153
Cash rented	126	129	129	125	246	307	249	183
Share rented	64	63	37	44	172	156	74	81
Operated <sup>1</sup>	572	467	488	431	776	698	629	427
Pasture	284	424	244	258	270	299	317	171
<i>Ratio</i>								
Ratios:								
Debt/asset	0.07	0.07	0.08	0.08	0.63	0.59	0.65	0.65
Return on assets	.04	.05	-.06	-.05	.13	.14	-.09	-.09
Cash expenses/gross income	.67	.66	1.22	1.27	.73	.71	1.25	1.27
Interest/gross cash income	.04	.05	.11	.12	.10	.10	.22	.20

Source: Farm Costs and Returns Surveys, USDA.

<sup>1</sup>"Operated" is land owned plus land rented from others (share, cash, and public industrial grazing association land) minus land rented to others.

## Debt At Risk Declines

**The share of farm operator debt owed by farms in a vulnerable financial position declined by \$6 billion in 1989, the largest share of which was owed to commercial banks.**

Total farm operator debt owed by farms in a vulnerable position was \$14 billion at the end of 1989, compared with \$20 billion at the end of 1988 (table 8). Just 3 years earlier, debt owed by farms in a vulnerable financial position was estimated at \$34 billion. This 60-percent reduction in debt owed by farms in a vulnerable financial position has occurred for a variety of reasons. First, there has been a general improvement in the earnings of farms, with a smaller percentage of farmers having insufficient earnings to offset their expenses. The improvement in earnings in 1989 was especially evident for farms in the larger economic classes. These farms also were the heaviest users of debt in their operations. Second, debt has been reduced as a result of repayment and restructuring or writeoffs by some lenders. The writeoffs and restructurings would particularly help reduce the amount of debt owed by farmers in highly leveraged positions and especially those with relatively low earnings. Finally, the improvement in farm leverage positions has resulted not only from a reluctance to acquire new debt but also from increased asset values (particularly real estate), changes which have improved the collateral base of outstanding loans.

Farmers who were 35-44 years of age accounted for 40 percent of the total debt owed by farmers in a vulnerable financial position (app. table 2). About 30 percent of the debt owed on vulnerable farms was owed by farmers who did not consider farming their primary occupation and on farms with less than \$10,000 in gross sales. Though not considered in this analysis, it is likely that this debt is supported by nonfarm income and assets not considered part of the farm business. About 70 percent of the debt of vulnerable farms was owed by cash grain and beef, hog, or sheep farms (66 percent of all farms). Another 9 percent was owed by dairy farms (7 percent of all farms). It is not surprising that these farms owed a disproportionate share of the debt of vulnerable farms. Cash grain farms tend to be concentrated in areas that have experienced large swings in asset values, such as the Corn Belt and Northern Plains. A large share of beef, hog, and sheep operations tends to be small when measured by sales, but they represent a large proportion of all

farms. Dairy farms tend to have a large investment in equipment and other facilities.

Although debt owed by vulnerable farms fell for most lenders, the largest reductions in the respective shares of this debt occurred for other individuals, Farmers Home Administration, production credit associations, and commercial banks (fig. 4). The majority of the vulnerable debt at the end of 1989 was owed to commercial banks (43 percent), followed by Farm Credit System lenders (22 percent), and Farmers Home Administration (19 percent) (table 8). Since 1986, commercial banks have held an increasing share of total debt and consequently a larger proportion of debt owed by vulnerable farms. Borrowers from commercial banks who were classified as vulnerable tended to be younger, earned relatively low commodity sales, and were less likely to consider farming their primary occupation than were borrowers from other lenders.

**Table 8--Farm operator debt owed by farms in a vulnerable financial position, 1986-89**

*The total debt owed by financially vulnerable farms has fallen 60 percent.*

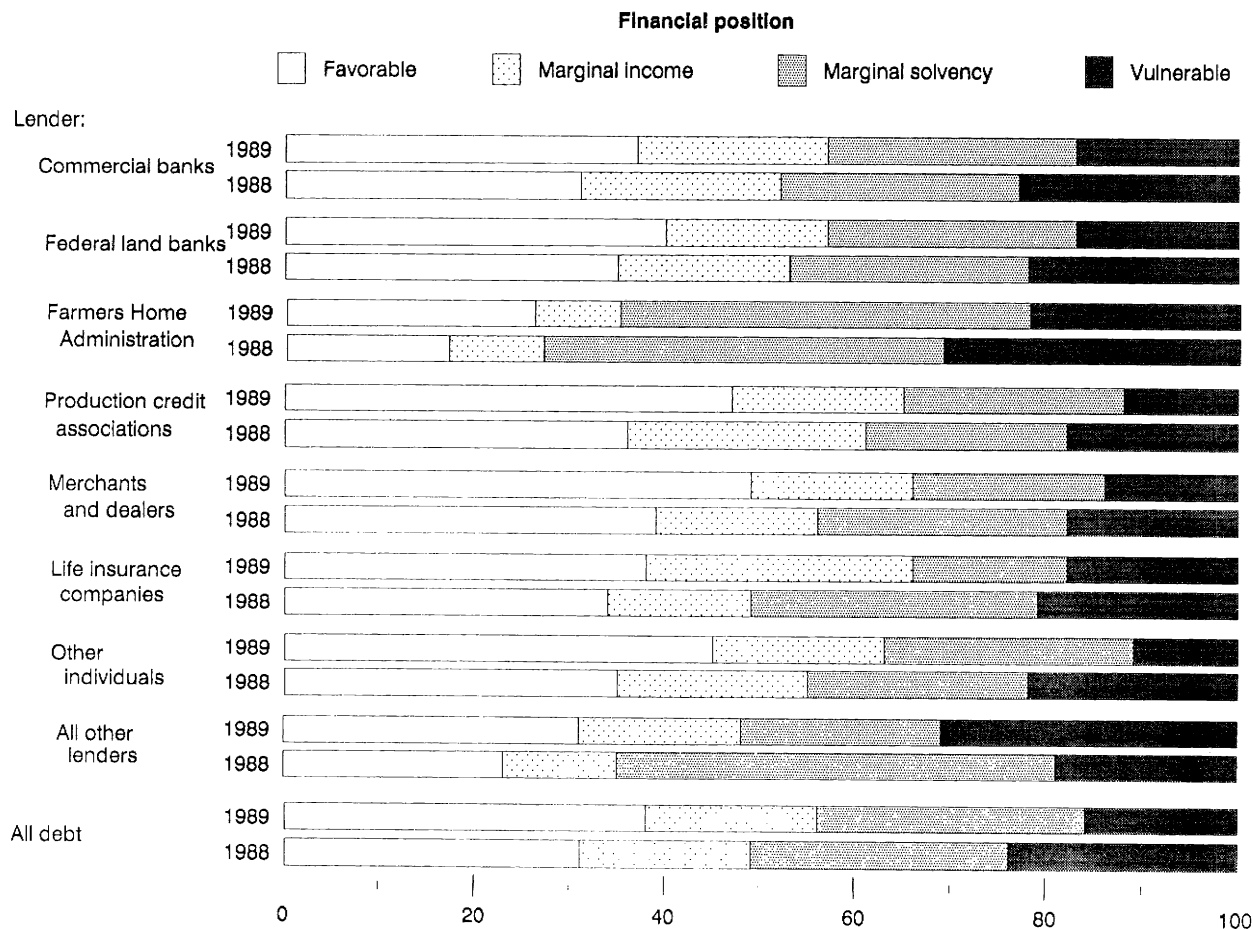
Item	1986	1987	1988	1989
<i>Million dollars</i>				
Vulnerable farm operator debt	34,185	18,790	20,042	13,895
<i>Percent</i>				
Debt owed by financially vulnerable farms to:				
Commercial banks	29	35	40	43
Farm Credit System	25	23	23	22
Farmers Home Administration	17	19	20	19
All other lenders	29	23	17	16

Source: Farm Costs and Returns Surveys, USDA.

Figure 4

### Distribution of farm operator debt by financial position and lender, 1988-89

*Agricultural portfolios of most lenders have improved, with vulnerable farms accounting for lower percentages of each lender's outstanding debt. The Farmers Home Administration portfolio continues to be more heavily weighted by vulnerable debt than other lenders'.*



Source: Farm Costs and Returns Surveys, USDA.

# Appendix table 1—Farm operator income statement by financial position, 1988-89<sup>1</sup>

The gross income of financially favorable farms was similar to that of financially vulnerable farms. But low crop earnings could not cover the large expenses for the vulnerable farms.

Item	Favorable		Marginal income		Marginal solvency		Vulnerable	
	1988	1989	1988	1989	1988	1989	1988	1989
	<i>Percent</i>							
Farms	56.91	62.78	29.50	25.95	6.65	6.45	6.94	4.82
	<i>Dollars per farm</i>							
Gross cash income:	66,052	72,434	36,570	34,982	156,179	161,467	66,869	66,648
Livestock sales	29,163	32,592	20,571	17,698	75,295	79,664	38,048	31,970
Crop sales (including net Commodity Credit Corporation loans)	28,023	30,384	10,970	13,241	55,565	59,445	17,527	24,481
Government payments	4,957	4,090	3,208	2,054	12,575	9,751	7,342	5,169
Other farm-related income <sup>2</sup>	3,910	5,367	1,822	1,989	12,743	12,607	3,953	5,028
<b>Less: Cash expenses</b>	<b>44,384</b>	<b>47,760</b>	<b>44,649</b>	<b>44,354</b>	<b>113,306</b>	<b>115,331</b>	<b>83,549</b>	<b>84,466</b>
Variable—								
Livestock purchases	5,335	5,604	5,857	5,817	20,964	18,013	13,408	14,917
Feed	6,652	7,399	6,480	5,770	17,781	17,330	12,153	10,874
Veterinary services and supplies	661	799	640	715	1,559	1,717	1,098	1,005
Other livestock expenses <sup>3</sup>	268	267	324	553	1,718	1,027	641	617
Seed and plants	1,897	2,048	1,546	1,428	3,751	4,449	2,420	3,082
Fertilizers and chemicals	5,379	5,927	4,466	4,605	10,242	11,505	7,011	8,811
Labor	4,800	5,294	4,360	5,060	7,287	9,906	6,054	5,862
Fuel and oil	2,332	2,433	2,045	2,112	4,892	4,724	3,125	3,219
Repairs and maintenance	3,304	3,833	3,832	3,922	6,690	7,071	5,195	5,246
Transportation and storage	1,627	809	1,267	748	3,363	1,693	2,312	1,104
Rent and lease payments	2,418	2,561	2,591	2,116	6,853	6,962	5,471	6,213
Machine-hire and custom work	829	961	810	870	2,020	2,726	1,224	1,394
Interest on operating loans	929	1,130	1,097	1,290	5,086	5,594	4,386	3,976
Utilities	1,726	1,741	1,830	1,557	3,304	3,897	2,668	2,159
Other variable expenses <sup>4</sup>	1,626	1,708	1,823	1,810	3,401	3,323	2,690	2,448
Fixed—								
Real estate and property taxes	1,475	1,624	1,592	1,648	2,001	2,000	1,627	1,757
Interest on real estate debt	1,868	2,183	2,733	2,871	9,979	10,584	10,202	9,507
Insurance premiums	1,259	1,440	1,356	1,463	2,415	2,809	1,864	2,274
<b>Equals: Net cash farm income</b>	<b>21,668</b>	<b>24,674</b>	<b>-8,079</b>	<b>-9,372</b>	<b>42,873</b>	<b>46,136</b>	<b>-16,679</b>	<b>-17,818</b>
<b>Less: Depreciation</b>	<b>4,822</b>	<b>3,975</b>	<b>5,627</b>	<b>4,946</b>	<b>9,010</b>	<b>8,528</b>	<b>7,539</b>	<b>6,292</b>
<b>Plus:</b>								
Value of inventory change	5,720	7,797	-4,634	-3,881	11,333	12,763	-2,629	-3,158
Nonmoney income <sup>5</sup>	2,960	3,277	2,819	2,636	2,401	2,522	2,661	2,667
<b>Equals: Net farm income</b>	<b>25,526</b>	<b>31,773</b>	<b>-15,521</b>	<b>-15,564</b>	<b>47,597</b>	<b>52,893</b>	<b>-24,236</b>	<b>-24,601</b>

<sup>1</sup>Based on combined net farm income and debt/asset ratio position. <sup>2</sup>Includes income from: machine-hire, custom work, livestock grazing, land rental, contract production fees, outdoor recreation, and any other farm-related income. <sup>3</sup>Includes livestock leasing, custom feed processing, bedding, and grazing. <sup>4</sup>Includes supplies, registration fees, and general business expenses. <sup>5</sup>Defined as the value of home consumption and imputed rental value of farm dwellings.

Source: Farm Costs and Returns Surveys, USDA.

**Appendix table 2—Distribution of farm operator debt by net farm income and solvency position, 1989**

*Most of the debt owed by financially vulnerable farms was from farmers who were younger, less likely to consider farming their major occupation, and operators of smaller farms—mostly cash grain; beef, hogs, or sheep; and dairy operations.*

Item	Favorable	Marginal income	Marginal solvency	Vulnerable
Percent				
All operator debt	37.79	17.75	27.74	16.72
Operator age:				
34 years or under	11.88	9.72	15.90	14.00
35-44 years	26.63	27.60	34.37	39.73
45-54 years	27.83	30.77	28.06	28.66
55-64 years	24.00	22.43	13.75	13.56
65 years or over	9.66	9.48	7.91	4.04
Economic class:				
Sales \$500,000 or over	17.74	11.27	23.21	13.47
Sales \$250,000-\$499,999	18.67	10.75	15.20	13.48
Sales \$100,000-\$249,999	29.25	17.74	30.61	18.60
Sales \$40,000-\$99,999	15.76	17.14	16.84	11.76
Sales \$20,000-\$39,999	6.10	9.63	5.15	7.31
Sales \$10,000-\$19,999	4.38	7.84	3.67	5.74
Sales under \$10,000	8.12	25.63	5.33	29.65
Region:				
Northeast	8.25	6.79	4.12	2.79
Lake States	15.70	7.59	18.14	11.19
Corn Belt	22.23	15.38	17.10	20.45
Northern Plains	11.73	11.50	15.78	13.10
Appalachian	7.23	7.87	5.05	6.64
Southeast	4.81	8.63	4.82	3.21
Delta	2.64	2.90	5.83	12.99
Southern Plains	6.70	13.37	7.61	7.11
Mountain	9.97	8.65	8.76	8.16
Pacific	10.74	17.31	12.79	14.36
Production specialty:				
Cash grains	29.37	21.60	28.38	29.79
Tobacco	2.25	1.05	1.77	1.36
Cotton	1.67	.66	5.61	2.14
Other field crops	5.11	5.80	5.57	5.69
Vegetables, fruit, nuts	6.35	12.86	4.76	5.57
Nursery, greenhouse	2.04	.97	2.26	1.61
Beef, hogs, sheep	27.47	38.75	19.93	39.68
Poultry	1.97	2.63	6.21	1.52
Dairy	20.26	7.12	20.43	8.68
Other livestock	3.51	8.56	5.09	3.97
Land tenure:				
Full tenant	4.89	3.32	9.27	9.27
Part owner	66.28	49.62	63.07	49.52
Full owner	28.84	47.06	27.67	41.21
Primary occupation:				
Farming	82.00	61.07	85.10	65.86
Hired manager	1.50	3.71	2.34	2.06
Other	16.51	35.22	12.56	32.08

Source: 1989 Farm Costs and Returns Survey, USDA.

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### **For additional information...**

Contact Mitch Morehart, Jim Johnson, or Dave Banker (202-219-0801), Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture, Room 937, 1301 New York Avenue, NW., Washington, DC 20005-4788.

The more detailed companion report, *Financial Characteristics of U.S. Farms, January 1, 1990*, will be available in December from the ERS-NASS address below.

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